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Edward K. Cheng

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REENVISIONING LAW THROUGH THE DNA LENS

EDWARD K. CHENG*

In recent times, no development has transformed the practice of criminal justice as much as DNA evidence. In little over fifteen years, DNA profiling has produced nothing short of a paradigm shift.¹ For police and prosecutors, DNA has become a potent weapon for identifying and convicting criminals. Trace biological material left at a crime scene now provides critical evidence for generating leads through “cold searches” of DNA databases and for convicting defendants at trial. At the same time, for defense attorneys, DNA has become an invaluable tool for seeking exonerations, because just as DNA can link defendants to crimes, it can exclude suspects and the wrongly convicted.

DNA is a special kind of evidence with few previous analogs: It is powerful, physical evidence of identity that remains stable and available for retesting long after trial. Its “code,” consisting of only four chemically distinct base-pairs, can be objectively sequenced (often by machine), eliminating much of the discretion and subjectivity that plagues traditional forensic methods. Finally, because the scientific community developed DNA typing, DNA evidence comes pre-packaged with all the indicia of scientific reliability: population statistics, pre-defined and pre-tested procedural standards, and known error rates.

The most important revolution wrought by DNA, however, comes not from the direct, case-by-case application of the technology, but from the broader shifts in perspective that it has engendered. DNA’s unique attributes have provided a new lens through which we can critique, rethink, and perhaps reform various aspects of our legal system.

The panel discussion that I had the privilege of introducing at the Powers and Pitfalls of Technology Symposium, held on February 6, 2004, is a testament to DNA’s pervasive influence. Each of

* Assistant Professor of Law, Brooklyn Law School. Many thanks to Margaret Berger, Peter Guthrie, and the editors of the *NYU Annual Survey of American Law*. Melissa Ballard provided excellent research assistance.

1. The first appellate case challenging the admissibility of DNA occurred in 1988. See *State v. Andrews*, 533 So. 2d 841 (Fla. Dist. Ct. App. 1988); Jennifer L. Mnookin, *Fingerprint Evidence in an Age of DNA Profiling*, 67 *BROOK. L. REV.* 13, 44 & n.90 (2001).

the panel participants provided examples of how DNA has empowered legal actors to challenge well-established assumptions and practices. Can we reform the criminal justice system to ensure greater accuracy and prevent future wrongful convictions? Should we relax doctrines such as repose and finality to accomplish this accuracy? How valid are the reigning forensic techniques and how do we assess their validity? The DNA lens brings all of these issues into sharp focus.

* * *

Post-conviction DNA testing imposes pressure on our longstanding notions of finality. As a historical matter, a strict finality doctrine made practical sense.² Most traditional forms of evidence are fleeting—memories fade, eyewitnesses move away, and (written) records are unwieldy to preserve and frequently lost. At the same time, new evidence is rarely dispositive.³ For example, even if a principal witness recants, the damage to the underlying case is rarely fatal. Other, conflicting evidence likely remains, and one could easily suspect the recanting witness of lying. As a result, the benefit of reopening judgments is simply not worth its costs. Any marginal benefit derived from considering new evidence is almost certainly outweighed by the difficulties associated with retrying a stale case.

When the new evidence is DNA, however, the calculus changes. DNA does not degrade or become less reliable.⁴ DNA also has few credibility issues, assuming compliance with proper procedures. And perhaps most importantly, in certain cases, DNA can dispositively exonerate a defendant.⁵ The availability of DNA

2. *Jeter v. Hewitt*, 63 U.S. (22 How.) 352, 364 (1859) (describing *res judicata* as rendering “white that which is black, and straight that which is crooked”).

3. See Daniel S. Medwed, *The Zeal Deal: Prosecutorial Resistance to Post-Conviction Claims of Innocence*, 84 B.U. L. REV. 125, 131–32 (2004) (noting that “non-DNA cases are much harder for defendants to overturn through post-conviction proceedings because of the absence of a method to prove innocence to a scientific certainty”).

4. Naturally, the DNA material left at a crime scene can degrade over time, but assuming that the material can be tested, the results will be reliable. Degraded DNA is either testable or not; it does not degrade in accuracy.

5. See U.S. DEP’T OF JUSTICE, NAT’L COMM’N ON THE FUTURE OF DNA EVIDENCE, POSTCONVICTION DNA TESTING: RECOMMENDATIONS FOR HANDLING REQUESTS 4–6 (1999) (defining five categories of DNA testing cases, ranging from instances in which testing can dispositively exonerate to instances in which testing is largely irrelevant or impossible), available at <http://www.ncjrs.org/pdffiles1/nij/177626.pdf>.

testing thus challenges the wisdom of having a strong finality doctrine.⁶

Professor Seth Kreimer's article, which expands upon his comments during the symposium panel discussion, explores the tension between finality and accuracy in the criminal justice system that is created by the rise of DNA. In the early days of DNA testing, prosecutors were extremely reluctant to reopen cases, citing "the importance of 'finality' in criminal justice."⁷ Since then, legislative reforms⁸ and commentary⁹ have encouraged the relaxation of finality, and post-conviction testing has become more common.

The pressure imposed by this newly resurrected focus on accuracy, however, extends beyond post-conviction testing requests by defendants. Other finality-based doctrines, including ones that limit prosecutors, are also called into question.¹⁰ As Professor Kreimer also notes, some foreign jurisdictions, most notably England, have begun encroaching on double jeopardy when DNA is involved, championing accuracy over finality.¹¹

Professor Barry Scheck's comments during the panel discussion continued the assault on finality, suggesting that the ability to reopen convictions should not be limited to DNA cases, but expanded to encompass all instances that involve persuasive forms of proof.¹² His discussion also demonstrated DNA's influence on the current reconsideration of statutes of limitation.¹³ Statutes of limitation historically provided defendants both repose and protection

6. See Seth F. Kreimer, *Truth Machines and Consequences: The Dark Side of "Accuracy" in Criminal Justice*, 60 N.Y.U. ANN. SURV. AM. L. 657 (2005) ("It would stretch legal fiction beyond the breaking point to characterize a prisoner as scientifically innocent, but guilty in the eyes of the law.").

7. Kreimer, *supra* note 6, at 655.

8. E.g., N.Y. CRIM. PROC. LAW § 440.30(1-a) (McKinney 2004) (providing defendants with access to post-conviction DNA testing); see also Rochelle L. Haller, *The Innocence Protection Act: Why Federal Measures Requiring Post-Conviction DNA Testing and Preservation of Evidence Are Needed in Order to Reduce the Risk of Wrongful Executions*, 18 N.Y.L. SCH. J. HUM. RTS. 101, 123-26 (2001) (describing a few early state statutes permitting post-conviction DNA testing).

9. E.g., Seth F. Kreimer & David Rudovsky, *Double Helix, Double Bind: Factual Innocence and Postconviction DNA Testing*, 151 U. PA. L. REV. 547, 554 (2002) (arguing for a constitutional right to post-conviction DNA testing).

10. See generally Roberto Mangabeira Unger, *The Critical Legal Studies Movement*, 96 HARV. L. REV. 561, 587 (1983) (describing the use of the counter-principles in a body of law to explore alternative institutions).

11. Kreimer, *supra* note 6, at 670-72.

12. Barry Scheck, Remarks at the Power and Pitfalls of Technology Conference (Feb. 6, 2004) (transcript on file with the NYU Annual Survey of American Law).

13. *Id.*

against prosecutions based on stale evidence. DNA, however, has provoked doubts about the balance struck. Some prosecutors have begun seeking John Doe warrants based on a specific DNA profile, hoping to circumvent limitation periods.¹⁴ Others have advocated for an abolition of statutes of limitation in cases involving biological evidence.¹⁵ Once again, DNA has reinvigorated debate and forced us to confront assumptions and traditions that heretofore have appeared cast in stone.

Both professors' remarks also touched on a broader critique of the criminal justice system. Through DNA profiling, Innocence Projects across the country have disturbingly revealed that errors occur far more frequently than one could have ever thought. The recent spate of exonerations dramatically illustrates that traditional forms of evidence—and indeed the criminal justice process itself—can be highly unreliable. For years, social scientists have admonished courts about the potential problems associated with eyewitness testimony¹⁶ and confessions,¹⁷ and legal commentators have deplored the disparities between prosecutorial and defense resources. Yet, without some well-accepted external measure of accuracy, no one really knew whether those theoretical problems ultimately caused any practical harm. DNA exonerations have now made those concerns nearly impossible to ignore.

Finally, Robert Epstein's comments demonstrated how DNA's influence extends beyond substantive identification issues and into

14. *E.g.*, William K. Rashbaum, *New York Pursues Old Cases of Rape Based Just on DNA*, N.Y. TIMES, Aug. 5, 2003, at A1 (describing the NYC John Doe Indictment Project and \$350,000 in federal grants used to fund the program).

15. *E.g.*, Cindi Lash, *Prosecutors Want More Time to Try Rape Cases*, PITTSBURGH POST-GAZETTE, Nov. 18, 2001, at A1 (reporting efforts by Pennsylvania legislators to extend or abolish limitation periods for certain crimes when DNA is available); Paul H. Robinson, *Justice Can Never Come Too Late*, WASH. POST, May 3, 2000, at A23 (arguing that new forensic tools like DNA make statutes of limitation unnecessary and that statutes of limitation should be abolished for serious felonies).

16. *E.g.*, *United States v. Hines*, 55 F. Supp. 2d 62, 71–72 (D. Mass. 1999) (allowing testimony of expert psychologist who testified to cognitive issues that reduce the reliability of eyewitnesses).

17. *E.g.*, *United States v. Hall*, 974 F. Supp. 1198, 1205 (C.D. Ill. 1997) (“[T]he science of social psychology, and specifically the field involving the use of coercion in interrogations, is sufficiently developed in its methods to constitute a reliable body of specialized knowledge under Rule 702.”). See generally PETER BROOKS, *TROUBLING CONFESSIONS* 144–93 (2000) (discussing the place of confessions in American culture); Richard J. Ofshe & Richard A. Leo, *The Decision to Confess Falsely: Rational Choice and Irrational Action*, 74 DENV. U. L. REV. 979 (providing a broad overview on the reasons why defendants falsely convict).

the actual methods of forensic scientists.¹⁸ DNA shows us what good science really looks like. Indeed, it establishes so powerful a model that it arguably drove the Supreme Court reasoning in *Daubert*,¹⁹ and led Mr. Epstein to file what he admits “some might consider to be the most unsuccessful motion ever filed in the history of criminal law”²⁰—a motion challenging the reliability and admissibility of fingerprints.

As DNA demonstrates, good science knows its own limitations and constantly tests its own validity. Scientific techniques have preset standards; technicians undergo periodic proficiency testing; and researchers publish new techniques so that they can be corroborated or discredited by others. DNA profiling has all of these characteristics and is even accompanied by population statistics that aid jurors (and researchers) in assessing just how probative a “match” really is.

Fingerprinting—or any other traditional forensic science, for that matter—has few if any of these characteristics. Instead, as Mr. Epstein related, fingerprint examiners have no defined standards, minimal proficiency testing, and perhaps most alarmingly, no established error rates.²¹ Fingerprint examiners refuse (and indeed are forbidden by professional norms) to discuss probabilities and population statistics, instead hiding behind rather dubious assertions of absolute certainty.²² So exposed, fingerprints can no longer be the “gold standard” of forensic science. That title now belongs to DNA.

The DNA lens forces us to confront fingerprinting and to ask what should be done with it. Perhaps fingerprints should be inadmissible, or alternatively, defense attorneys should be given the resources and training necessary to expose fingerprinting’s weaknesses to juries. We can of course debate the solutions, but in

18. Robert Epstein, Remarks at the Power and Pitfalls of Technology Conference (Feb. 6, 2004) (transcript on file with the *NYU Annual Survey of American Law*).

19. Margaret A. Berger, *Expert Testimony in Criminal Proceedings: Questions Daubert Does Not Answer*, 33 SETON HALL L. REV. 1125, 1129 (2003) (noting that DNA “may have paved the way for the Supreme Court’s opinion in *Daubert*” and observing that the *Daubert* criteria were instrumental in placing “DNA profiling on such firm ground”); David L. Faigman, *The Tipping Point in the Law’s Use of Science: The Epidemic of Scientific Sophistication That Began with DNA Profiling and Toxic Torts*, 67 BROOK. L. REV. 111, 112 (2001) (suggesting that DNA played a significant role in encouraging the Supreme Court to reach the *Daubert* decision).

20. Epstein, *supra* note 18.

21. *Id.*

22. Simon A. Cole, *Fingerprinting: The First Junk Science?*, 28 OKLA. CITY U. L. REV. 73, 87–88 (2003).

the end, I have little doubt that fingerprinting will become a more rigorous "science," and DNA will deserve much of the credit.

* * *

Truly special developments in law cause us to rethink the broader underpinnings of our legal system, and DNA certainly has been and will continue to be a part of this select group. Indeed, one cannot even begin to understand the future of evidence law without considering DNA's potential ramifications. Its substantive powers of identification have already caused legal actors to question firmly rooted traditions such as finality and repose, and generated concerns about the accuracy and fairness of the criminal justice system. At the same time, its methodological rigor has formed the impetus for rethinking how courts handle scientific evidence, forcing scientifically disinclined judges and lawyers alike to grapple with the thorny relationship between law and science.